

Appl. No. : 10/660,359  
Filed : September 10, 2003

AMENDMENTS TO THE CLAIMS

The claims as listed below will replace all prior listings and presentations of claims in the above-identified application.

1. (CURRENTLY AMENDED) A method of heating a substrate in a process chamber using a heated chuck, comprising:

lowering the substrate onto the chuck;

heating the substrate to a first temperature less than a temperature of the chuck;

raising the substrate away from the chuck while the substrate is at the first temperature;

processing the substrate while the substrate is at the first temperature and raised away from the chuck;

lowering the substrate back onto the chuck;

heating the substrate to a second temperature greater than the first temperature; and

further processing the substrate after heating the substrate to the second temperature.

2. (ORIGINAL) The method of Claim 1, wherein the processing comprises photoresist ashing.

3. (ORIGINAL) The method of Claim 1, wherein the temperature of the chuck is maintained constant throughout all of the method steps.

4. (CURRENTLY AMENDED) A method of controlling a temperature of a substrate during a substrate processing sequence, the method comprising:

providing a thermal chuck at a first temperature that is at least a maximum desired substrate temperature and maintaining the chuck at said first temperature;

supporting a wafer above the chuck;

selectively moving the substrate between a plurality of positions by selectively increasing and decreasing a gap between the substrate and the chuck; and

lowering the wafer into a heating position until the wafer reaches a low processing temperature, then raising the wafer to an upper position above the chuck;

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conducting processing of the wafer at the plurality of positions upper position while the wafer is at the low processing temperature;

lowering the wafer into the heating position until the wafer reaches a high processing temperature, then raising the wafer to the upper position above the chuck; and

conducting processing of the wafer at the upper position while the wafer is at the high processing temperature;

wherein each of the above steps is performed while maintaining the chuck at the first temperature.

5. (ORIGINAL) The method of Claim 4, further comprising maintaining the substrate in proximity to the chuck for a pre-determined length of time in order to increase the temperature of the substrate to a desired temperature.

6. (ORIGINAL) The method of Claim 4, further comprising varying a chamber pressure during a heating or cooling step to facilitate increased heat transfer between the chuck and the substrate.

7-14. (CANCELLED)